DOCUMENT RESUME

ED 131 450 CS 003 051

AUTHOR Pearce, C. Glenn
TITLE Summaries of Research Studies on Factors Affecting Reading Comprehension in Business Communication.
PUB DATE 75
NOTE 25p.; Paper presented at the Annual Meeting of the American Business Communication Association International Conference (Toronto, Canada, December 1975)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Business Communication; Communication Skills; Failure Factors; *Layout (Publications); Listening Comprehension; Literature Reviews; *Reading Comprehension; *Reading Research; Success Factors

ABSTRACT

Published and unpublished studies of factors related to reading comprehension in business communication are briefly summarized. Factors considered include organization of copy, format and appearance, graphics, distractions, reading time, listening versus reading, reader attributes, and readability. (AA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED131450.

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SUMMARIES OF RESEARCH STUDIES ON FACTORS AFFECTING READING COMPREHENSION IN BUSINESS COMMUNICATION

by
C. Glenn Pearce, Ph.D.
School of Business
Virginia Commonwealth University
Richmond, Virginia

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
C. Glenn Pearce
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

for
American Business Communication Association
International Conference

Toronto, Canada
December, 1975

CS 003057

Copyrighted by

Clifton Glenn Pearce

1975

ACKNOWLEDGMENTS

Appreciation is extended to Dr. Howard Jackson, Acting Chairman, Department of Business Education and Office Administration, School of Business, Virginia Commonwealth University, Richmond; Dr. Jackson's encouragement and advice during the tenure of the preparation of this manuscript were invaluable.

Appreciation is also extended to Miss Joyce Wilkins, Secretary, Department of Business Education and Office Administration, School of Business, Virginia Commonwealth University, Richmond. Miss Wilkins typed the manuscript and supervised the reproduction of copies.

Finally, appreciation is extended to Mr. Clay Light, Graduate Assistant, Department of Business Education and Office Administration, School of Business, Virginia Commonwealth University, Richmond, for assisting in abstracting several studies included in this manuscript.

FOREWORD

This paper supersedes the paper entitled REVIEW, SUMMARY, AND ANALYSIS OF RESEARCH FINDINGS IN WRITTEN COMMUNICATION APPLICABLE TO WRITTEN BUSINESS COMMUNICATION, which was presented to the American Business Communication Association, Southeast Region Conference, in April, 1975. Some findings attributed to Richard Davis were reported in error in the earlier paper. To correct this problem, the original studies were obtained and reviewed, and Dr. Davis critiqued the April paper.

SUMMARIES OF RESEARCH STUDIES ON FACTORS AFFECTING
READING COMPREHENSION IN BUSINESS COMMUNICATION

Organization of Copy

Headings

Parker (1962) tested college freshmen on a 2,000 word passage with a multiple choice test and found that one-level headings do not contribute significantly to comprehension. Davis (1962) tested college freshmen on a 3,800 word passage using three levels of headings and also found no significant differences; Davis followed with a second study (1965), also using a 3,800 word passage, and confirmed the conclusion of the previous study.

In a study reported in 1972 (DeVillier), college juniors were tested with a multiple choice test on a 1,350 word passage containing one-level headings. DeVillier's results also showed no significant differences.

Then, Landrum (1974), in a tightly controlled study, tested college juniors on a 1,300 word passage using a multiple choice test which had been validated and on which a high correlation coefficient had been obtained (.84). Landrum found that one-level headings do contribute significantly to reading comprehension. Pearce (1974), in collaboration with Landrum, doubled the length of the reading time (but in every other way duplicated the Landrum study) and found that headings do not contribute significantly to reading comprehension on a 3,200 word passage. These results give reason to believe that the presence of headings as a contributor to comprehensibility may be a function of the length of reading time. If so, apparently the longer the reading time, the less likely is the presence of headings to increase comprehension.

Paragraphs

Topic Sentences

Parker (1962) found that the use of topic sentences increases comprehension significantly. Parker's subjects were college freshmen who were tested with a multiple choice examination after reading a 2,000 word passage. Subjects who were tested one week later, however, showed no significant increase in comprehension due to the inclusion of topic sentences.

Length

In a 1962 study, Davis found that short (as opposed to long) paragraphs increases comprehension significantly for females (but not for males or engineers) when no introduction is present in the passage. The presence or absence of both an introduction and shorter paragraphs was found to be detrimental to comprehension. Davis' subjects, college freshmen, read a 3,800 word technical passage in which short paragraphs averaged 84.5 words and long paragraphs 292 words.

Inductive or Deductive Arrangement

Landrum (1974) and Pearce (1974) tested the effect on comprehension of inductive and deductive paragraph arrangement in a short (1,300 word) and long (3,200 word) passage, respectively. Landrum's and Pearce's subjects were college juniors who were tested with a multiple choice examination. The results of both studies showed no significant differences in comprehension between the inductive and the deductive arrangement.

Introductory Material

Parker (1962) tested college freshmen on a 2,000 word passage with a multiple choice test. The results showed that an introductory passage increases comprehension for all linguistic ability levels when compared to a passage without the introduction. Parker also found that an introductory

passage increases comprehension for subjects with high linguistic ability when used in combination with topic sentences, headings and concluding summaries; and that an introductory passage increases comprehension for subjects with average linguistic ability when used in combination with topic sentences.

Davis (1962) tested college freshmen on a 3,800 word passage, finding that the presence of an introductory passage increases comprehension for females but not for males or engineers. The presence or absence of both an introduction and short paragraphs was detrimental to all groups. A 1965 study by Davis, also testing college freshmen on a 3,800 word passage, showed no significant increase in comprehension when an introductory passage was used. The conclusion of this 1965 study was further supported by the results of a 1966 study by Davis.

Schnell (1972) tested college freshmen on a 1,000 word passage using a multiple choice test. The results of this study showed a significant increase in comprehension when an introductory passage was present rather than absent.

Concluding Material

A study by Parker (1962) in which college freshmen read a 2,000 word passage and took a multiple choice test showed that the presence of a concluding summary increases immediate recall for all ability levels when compared to the absence of such a passage. Further, the results of this study showed that comprehension is increased significantly for students of high linguistic ability when a concluding summary is used in combination with topic sentences, headings and a beginning summary; and for average linguistic ability subjects when used in combination with topic sentences and headings. The presence of this concluding summary did not accompany a significant increase in comprehension for subjects tested one week later.

Schnell (1972) tested college freshmen on a 1,000 word passage with a multiple choice test. The results of this study showed a significant increase in comprehension for all ability levels when a concluding passage is present rather than absent. In fact, Schnell found a concluding summary more effective than an introductory passage used together with a concluding passage.

Introductory and Concluding Material

The results of a study by Schnell (1972) showed that the use of both introductory and concluding material in the same passage increases comprehension significantly compared to a passage containing neither type material. Schnell's subjects were college freshmen who read a 1,000 word narrative passage and answered questions on a multiple choice test.

Internal Orienting Material

In a 1965 study, Davis discovered that internal orienting material (information within the reading passage used to orient the reader and indicate the pertinence of given portions of the passage) lowers comprehension for "average" subjects with known technical interests. The inclusion of the material showed no effect on comprehension for "bright" subjects with or without known technical interests or for "below average" subjects with known technical interests. Davis' subjects were college students who read a 3,800 word technical passage and then took a multiple choice test.

Sentences

Davis conducted two experiments in which sentence length was tested as a variable which might affect comprehension (1969, 1972). Subjects in the first experiment were college students who read a 3,619 word technical passage and then answered questions on a multiple choice test. Sentences were either long or short: Long sentences averaged 36.9 words, and short sentences averaged 19.67 words. The results showed no difference between

long and short sentences in their effect on comprehension for all audiences except "bright" males with no known technical inclinations; for this audience, long sentences were more effective.

In the second experiment (1972) Davis shortened the reading passage to 2,342 words, allowing more reading time, and tested a similar group of subjects in a manner like that of the first experiment. This time, the results showed short sentences to be no more comprehensible than long sentences for "average," "bright," and "very bright" subjects.

Report Parts

Three experiments (DeVillier, 1972; Landrum, 1974; Pearce, 1974) have been conducted in which inductive and deductive arrangement of report parts have been measured for comprehension. All studies were conducted with college juniors as subjects, and all subjects were tested with multiple choice tests. DeVillier used a 1,350 word passage, Landrum a 1,300 word passage, and Pearce a 3,200 word passage. The results of each of these studies indicated that neither arrangement is significantly superior as a contributor to comprehension.

Format and Appearance

Corrections, Reproduction, Margins

Four studies (Davis, 1971, 1974a, 1974b, 1974c) included a measure of comprehension in an effort to determine whether poor typewriting corrections, poor reproduction of copy, or irregular margins affect comprehensibility. The first experiment (1971) tested college level students with a multiple choice examination on a 3,619 word passage. All subjects were categorized as "bright" to "very bright." One form of the word passage read by the subjects contained corrections which were undetectable (perfect copy) in reproduced form; another form contained corrections made by x-ing out,

running lines through, or inserting words above the line with a caret to correct errors.

The reproduction variable was treated as follows: One form of the word passage was a clean, neatly reproduced copy; another form contained intentionally dirtied pages, unclean mats before reproduction, thumbprints on two pages, careless lines across two pages, copy noticeably crooked on one page, and ink spots on four pages. Then, the margins variable was treated as follows: One form of the word passage contained a straight left margin on each page but a uniform right margin. Another form contained occasionally uneven left margins and ragged right margins. The results of this 1971 experiment showed an uninterpretable interaction effect between corrections and reproduction for "bright" young females without known technical inclinations and "very bright" males with known technical inclinations. Scores of three other audiences showed no differences.

Davis then conducted a second experiment (1974a) using a more exaggerated altered form--the poor corrections were poorer, the reproduction sloppier, the margins more irregular--to see if a more definite effect on comprehension could be detected. Subjects for this experiment and the conditions under which the examination was administered were similar to those in the 1971 study. The passage read by the subjects this time contained only 2,342 words. The results showed no significant differences.

Davis (1974b) attempted to determine whether motivation affects performance when corrections, margins, and reproduction are varied as independent variables. The results showed no differences when audiences were told that test performance would not affect course grades and when audiences were told nothing. The reading passage and procedure were the same as that in Davis' 1974a study. In retesting these variables under similar circumstances with similar audiences, Davis (1974c) again found no significant differences

when audiences were told or were not told beforehand that test performance would not affect course grades.

Type Size

DeVillier (1972) compared pica (10 point) with elite (12 point) type. Subjects for this study were college juniors who read a 1,350 word passage and took a multiple choice test. The results showed neither pica nor elite type to be more comprehensible.

Line Spacing

The study DeVillier reported in 1972 also measured single line spacing in comparison with single and one-half line spacing. The results showed neither variation to be more comprehensible.

Type Style

A study by Kunst (1972) compared five type styles with one another: Times Roman, Memphis, Spartan Medium, Wedding Text, and Linoscript. The subjects were high school sophomores, each of whom read for one-half hour from a booklet set in one of the five type styles and then took a comprehension test. The results showed no type style to be more comprehensible than any other.

Graphics

Drawings

Davis (1962) tested college freshmen (grouped as engineers, males, and females) with a multiple choice test on 3,000 word technical passage in which drawings were either present or absent. Comprehension of the copy containing drawings proved to be significantly higher for all three groups than when drawings were absent. In 1965 Davis reported a study in which the 1962 study was repeated for this variable. Subjects, the reading passage, and the criterion test were similar to that of the earlier study, but this time drawings were either absent, used alone, or used together with verbal

descriptions in the copy. The results of this study showed that the presence of drawings (as opposed to absence) increases comprehension significantly for "bright" and "average" subjects with known technical interests and for "bright" subjects without known technical interests. A 1966 study by Davis showed that the presence of drawings increases comprehension for "very bright" males who are technically inclined and who either have or have not had technical training. This audience was similar to those in the 1962 and 1965 studies, and the same reading passage was used.

Tables and Figures

Gros (1971) tested college level subjects with a multiple choice examination to determine the effect on comprehension of the use of tables and figures when used alone, when used in conjunction with a narrative passage, and when absent (narrative passage only). The results showed that the written and graphic variables used together are more comprehensible than either used alone.

Distractions (Violating Conventions)

Shifts in Point of View

Davis (1969) measured seven audiences for the effects on comprehension of shifts in point of view. Audiences read a 3,619 word technical passage and took a multiple choice examination on the content. Forty-four shifts in person, tense, and mood were introduced into one version of the reading passage; the other version contained no such shifts. The results showed significantly increased comprehension at the .01 level for "bright" young males with no known technical inclinations and at the .05 level for "bright" young females with no known technical inclinations. However, comprehension for "very bright" males with known technical inclinations was increased significantly at the .05 level when these shifts were present.

Subject-Verb Agreement

Two experiments by Davis (1969, 1972) were conducted using college level subjects who answered questions on a multiple choice examination after reading a technical description. In each experiment the subject and verb either agreed or disagreed. Subjects in the 1969 experiment (all classified as "bright" or "very bright") read a 3,619 word passage, and the results, though somewhat inconclusive, showed that subject-verb agreement is not a variable affecting comprehension. In the second experiment (1972) Davis shortened the reading passage to 2,342 words, allowing more time to read the passage. This time, the results showed subject-verb agreement not to be a significant contributor to comprehension.

Expression

Davis (1974c) tested college subjects to determine whether variations in expression affect comprehension of a technical reading passage. The altered form contained 26 misspellings, 14 errors in agreement between subject and verb, and comparatively long sentences with unwieldy syntax. The unaltered form contained none of these errors. The results showed a significant effect at the .05 level favoring the unaltered form.

Spelling

In a 1972 study, Davis tested misspelling of words as a factor which might affect comprehension. The results of the study showed an interaction effect between spelling and shifts in points of view (shifts in person, tense, and mood) for "very bright" males with known technical inclinations. Scores were highest when spelling was correct and no shifts were made in point of view.

Length of Reading Time

Pearce (1974), working in conjunction with Landrum, conducted an experiment in which college juniors were tested with a multiple choice

examination designed to measure comprehension. Pearce's study, conducted with and at the same time as Landrum's experiment, was identical to Landrum's study in every respect except for the length of the report read by the subjects. Landrum's passage contained 1,300 words; Pearce's contained 3,200 words. The results of Pearce's study showed that the length of reading time is a factor affecting comprehension.

Listening

A study conducted by DeVito (1965) using college level subjects who either read or listened to a 300 word passage (speaker/writer was the same in each case) showed no difference in comprehension when tested by a cloze procedure test. The conclusion here is that, given identical circumstances, neither oral nor written discourse is more comprehensible. Abrams (1966) tested high school seniors to determine whether skill in listening is related to skill in reading. The Brown-Carlson Listening Comprehension Test was used to measure listening ability, and the Nelson-Denny Test, Form A, was used to measure reading skill. The results showed that listening comprehension and reading comprehension are positively and significantly related.

Horowitz (1968) reported the results of a series of seven studies conducted over a period of eight years designed to determine the nature of the differences in organization, distortion, structuring, and remembering listened to material as opposed to read material. The subjects were college level students; the variable measured was complexity of material varied lexically, syntactically, and ideologically. Subjects were asked to either listen to a tape twice or read a passage twice and then tell or write what was heard or read. The data was analyzed for total cognitive units, for omissions, for distortions, and for additions of units. Some of the pertinent findings were: 1) Listeners distort material more than do readers but produce fewer omissions; 2) listener reproduction is stylistically superior to that of

readers; 3) listeners produce more material (including extraneous material), more signals, and more ideas than readers; 4) readers who speak have lower scores than readers who write, and listeners who write have lower scores than listeners who speak; and 5) fidelity to the material is highest for listeners who speak.

Reader Attributes and Abilities

Verbal Ability, Intelligence, Prior Reading Ability

A study by Watson (1971) was designed to determine the relationship between comprehension and level of verbal ability. College level subjects were grouped as high, middle, and low in verbal ability and were tested with a cloze procedure test on a written passage. Watson's results showed that subjects with high verbal skills comprehend significantly more of the information in the passage than either middle or low verbal groups. These results indicate that verbal ability is positively related to comprehension ability.

Watson's results confirmed the findings of an earlier study by Parker (1962), who found that variations in topic sentences, headings, beginning summaries, and concluding summaries are comprehended differently by high, middle, and low linguistic ability groups.

Davis (1966) found no differences in comprehension of a 3,800 word technical passage read by "very bright" college students with technical interests and both with and without technical training; however, both these audiences did comprehend the passage better than "bright" males and females with known technical interests. Further, Davis (1969) determined that "very bright" audiences scored significantly higher than did "bright" audiences on a test similar to that of the 1966 study. Further evidence revealed that "very bright" non-technical subjects scored significantly higher than did "bright" non-technical subjects; also, scores of "bright" males without known technical inclinations showed no significant differences from those

of "bright" females without known technical inclinations. However, "bright" young males with technical inclinations scored no better than did "very bright" males without technical inclinations.

Davis (1971) found that "very bright" subjects scored significantly higher on a test on the content of a technical passage than did "bright" subjects. Further, "very bright" subjects with known technical inclinations scored higher than did "bright" subjects with known technical inclinations.

Davis (1972) found that "very bright" males with known technical inclinations scored higher on a test of comprehension of a technical passage than did "bright" males with known technical inclinations. Moreover, "bright" males with known technical inclinations scored higher on the same test than did "average" males with known technical inclinations.

Davis (1974a) found that "bright" males with known technical inclinations scored significantly higher on a test on the content of a technical passage than did "average" males with known technical inclinations. Further, "very bright" males outperformed "bright" males, both groups having known technical inclinations. Moreover, two audiences of equal ability and equal technical inclinations showed no differences in test scores.

A 1972 study by Schnell concluded that the degree of general intelligence and prior reading ability does not affect performance on a multiple choice test examining comprehension of a 1,000 word passage in which an organizer (summary type statement) was placed before, after, and before and after the main passage.

Watson's was the only study reported in this section in which the central purpose was to measure the independent variable cited. All other findings of studies in this section are ancillary.

Prior Training

Davis (1971) found no differences in test scores on the content of a technical passage between "very bright" males with known technical inclinations and instruction in technical writing and similar subjects without technical training.

Interest or Aptitude

In a 1962 study Davis tested college freshmen with a multiple choice test on a 3,800 word passage; the results showed that engineers (males) comprehended this copy, which was of a technical nature, better than did either males or females who were not engineers.

Using the same reading passage from the 1962 study, Davis (1965) found that "bright" college students with known technical interests comprehended the copy better than did "bright" college students without known technical interests or "average" college students with known technical interests. At the same time, "bright" college students without known technical interests and "average" college students with known technical interests comprehended the passage better than did "below average" college students with known technical interests.

In a 1969 study, Davis found that subjects with known technical inclinations scored significantly higher on a comprehension test than did subjects without such known inclinations. All subjects for this study were classified as "bright" or "very bright"; males and females were included. Further, this study revealed that "bright" males with known technical inclinations scored significantly higher than did like audiences without known technical inclinations; this result supports the findings of Davis' 1962 study. As added support to the findings of Davis' 1962 and 1965 studies, the results of this study showed that "bright" males with known technical inclinations scored significantly higher than did "bright" males and females

without known technical inclinations; in the same vein, "very bright" males and females with known technical inclinations scored significantly higher than did comparable groups without known technical inclinations.

Davis (1971) found that "bright" and "very bright" males with known technical inclinations scored significantly higher on a test after reading a 3,619 word technical passage than did "bright" males and females without known technical inclinations. This experiment also showed that "bright" young males with known technical inclinations scored higher than did comparable audiences without known technical inclinations; further, "bright" males and females with known technical inclinations scored higher than did "bright" males and females without known technical inclinations.

Davis (1972) found that "bright" males with known technical inclinations scored higher on a comprehension test than did "bright" males and females without known technical inclinations. The reading passage was a technical description. Moreover, no differences between scores were obtained when "bright" males and females without known technical inclinations were compared with "average" males with known technical inclinations.

Davis (1974a, 1974b) found further support for earlier studies in determining that "bright" males with known technical inclinations scored higher on a test of a technical passage than did "bright" males and females without known technical inclinations. Further, (Davis, 1974a) "average" males with known technical inclinations performed as well as "bright" males and females without known technical inclinations. Moreover, (Davis, 1974b) "very bright" males with known technical inclinations scored significantly higher than did "bright" males with known technical inclinations.

All findings in Davis' studies cited in this section were ancillary to the primary purpose of the experiments.

Retention

Parker (1962) found that although some combinations of the variables of topic sentences, headings, beginning summaries and ending summaries increases comprehension significantly for immediate recall, no significant increases are evident for subjects measured one week later. Parker's subjects were college students.

In a 1970 study, Corrozi attempted to determine the effect of question format, type of question, and amount of reading time on both short term and long term retention. Eleventh grade subjects were asked to read prose material: Some read under the pressure of time while others were given more time; some were asked questions about the material before reading, some after reading, and some were asked no questions; some subjects were asked factual questions while others were asked inferential questions. One group was tested immediately, and another group was tested one week later. The results showed that: Short term retention is improved significantly with an increased reading time; the placement of questions has no effect as long as the reading time is fixed (reading under pressure); short and long term retention are improved significantly under a longer reading time when no questions are asked during the reading time; correct responses to inferential questions are significantly greater than correct responses to factual questions for long term retention; and exposure to inferential questions results in significantly improved responses for both long and short term retention.

Structure Recognition

Abrams (1966) measured the relationship between reading comprehension and message structuralization using high school seniors as subjects. Reading comprehension was measured by the Nelson-Denny Reading Test, Form A; message structuralization was measured by the Knower-Goyer Organization Test (a test which measures skill in recognition of the relationship of outline material

to purpose, and differentiation of significant from insignificant details). The results showed that the ability to recognize the structure of a written message correlates significantly and positively with reading comprehension.

Sex

Davis (1962) tested college freshmen with a multiple choice test on a 3,800 word passage and found no differences in comprehension between males and females. This finding is supported by a 1971 study by Davis revealing no significant differences in test scores between males and females, all without known technical inclinations.

National Origin

Davis (1969) found that "very bright" subjects who speak Australian English scored as well on a test on the content of a technical description as did "very bright" subjects speaking American English. This finding was ancillary to the primary purpose of the experiment.

Readability

Numerous studies during the past few decades have measured the relationship between readability (as measured by simplification techniques and by formulas) and reader comprehension. Nolte (1937) tested the effect of difficulty of vocabulary on comprehension and found no significant difference in reading comprehension favoring either of two methods of simplification: 1) Restricting the vocabulary of a passage to the first 2,500 words of Thorndike's Book of Twenty Thousand Words or 2) Restricting the vocabulary to Ogden's Basic Words. Wilson (1943) prepared a 600 word and a 1,200 word version of the same passage, the longer version being two grade levels more difficult. Upon testing subjects, Wilson found the longer, structurally more difficult version to be more comprehensible. Swanson and Fox (1953) prepared easier and harder versions (four grade level differential) of articles from a monthly magazine and found: 1) No difference in comprehension when the

material was read voluntarily, and 2) a significant difference favoring the easier version when subjects were assigned articles to read.

Klare (1963, pp. 22-23) investigated the effects on reader comprehension of simplified vocabulary in the content areas of history, geography, and social sciences. The simplified version showed no significant superiority to the unaltered version as measured by a comprehension test. Schwimmer (1971) experimented to determine whether increases in stylistic difficulty as measured by readability formulas is related to reading comprehension. The results showed no relationship. Watson (1971) designed a study to determine the relationship of levels of verbal ability (high, middle, low) to the comprehension of written material altered for readability. The same material was written at grades 7, 11, and 16 and tested on junior college students using a cloze procedure test. The results showed no significant differences among the three readability levels. Further, the results showed that as readability level increases, differences between verbal ability and comprehension decrease.

References

Book

Klare, George R. THE MEASUREMENT OF READABILITY. Ames, Iowa: Iowa State University Press, 1963.

Periodicals

Abrams, Arnold G. The Relation of Listening and Reading Comprehension to Skill in Message Structuralization. JOURNAL OF COMMUNICATION, 1966, 16, 116-125.

Chall, Jeanne S. Readability: An Appraisal of Research and Application. BUREAU OF EDUCATIONAL RESEARCH MONOGRAPHS, Ohio State University, 1958, No. 34.

DeVillier, J. Lincoln. Communication Effects of Variations in Organization and Format. AMERICAN BUSINESS COMMUNICATION ASSOCIATION JOURNAL, 1972, 9, 5-18.

DeVito, Joseph A. Comprehension Factors in Oral and Written Discourse of Skilled Communicators. SPEECH MONOGRAPHS, 1965, 32, 124-128.

Horowitz, Milton W. Organizational Processes Underlying Differences Between Listening and Reading as a Function of Complexity of Material. JOURNAL OF COMMUNICATION, 1968, 18, 37-46.

Holte, Karl F. Simplification of Vocabulary on Comprehension in Reading. ELEMENTARY ENGLISH REVIEW, 1937, 24, 119-124.

Parker, John P. Some Organizational Variables and Their Effect Upon Comprehension. JOURNAL OF COMMUNICATION, 1962, 12, 27-33.

Swanson, Charles E. and Fox, Harland G. Validity of Readability Formulas. JOURNAL OF APPLIED PSYCHOLOGY, 1953, 37, 114-118.

Wilson, Mary C. The Effect of Amplifying Materials on Comprehension. JOURNAL OF EXPERIMENTAL EDUCATION, 1948, 13, 5-8.

Unpublished Materials

Corrozi, John F. The Effects of Reading Time, Type of Question, and Instructional Format on Short and Long-Term Retention of Relevant and Incidental Prose Material. Unpublished doctoral dissertation, University of Delaware, 1970.

Davis, Richard M. An Experimental Approach to Effective Communications. Unpublished doctoral dissertation, University of Michigan, 1962.

Davis, Richard M. Effective Technical Communications Mechanical Description--Experiment II. Unpublished manuscript, Air Force Institute of Technology, 1965.

Davis, Richard M. Effective Technical Communications Mechanical Description--Experiment III. Unpublished manuscript, Air Force Institute of Technology, 1966.

Davis, Richard M. Effective Technical Communications Expression--Experiment I. Unpublished manuscript, Air Force Institute of Technology, 1969.

Davis, Richard M. Effective Technical Communications Copy Preparation and Reproduction--Experiment I. Unpublished manuscript, Air Force Institute of Technology, 1971.

Davis, Richard M. Effective Technical Communications Expression--Experiment II. Unpublished manuscript, Air Force Institute of Technology, 1972.

Davis, Richard M. Effective Technical Communications Copy Preparation and Reproduction--Experiment II. Unpublished manuscript, Air Force Institute of Technology, 1974a.

Davis, Richard M. Effective Technical Communications Copy Preparation and Reproduction--Motivation. Unpublished manuscript, Air Force Institute of Technology, 1974b.

Davis, Richard M. Effective Technical Communications: Expression, Copy Preparation, Motivation. Unpublished manuscript, Air Force Institute of Technology, 1974c.

Gros, Ridley Joseph. Determination of the Effectiveness of Selected Organization Communication Techniques. Unpublished doctoral dissertation, The Louisiana State University and Agricultural and Mechanical College, 1971.

Kunst, John Robert. Type Styles as Related to Reading Comprehension. Unpublished doctoral dissertation, Arizona State University, 1972.

Landrum, Mildred Wood. The Effect of Selected Variations in Organization on the Comprehension of a Short Business Memorandum Report in Administrative Communication. Unpublished doctoral dissertation, Georgia State University, 1974.

Pearce, Clifton Glenn. The Effect on Reader Comprehension of Organization of Report Parts, Organization in Paragraphing, and Use of Headings in a Long Business Report. Unpublished doctoral dissertation, Georgia State University, 1974.

Schnell, Thomas R. The Effects of Organizers on Reading Comprehension of Prose Materials. Unpublished doctoral dissertation, Southern Illinois University, 1972.

Schwimmer, Stephen. The Relationship of Readability to Reading Comprehension. Unpublished doctoral dissertation, The University of Connecticut, 1971.

Watson, Paul Gordon. Readability and Comprehension of Written Instructional Materials in Homogeneous Groupings of Vocational/Technical Students in an Urban Community College. Unpublished doctoral dissertation, University of Washington, 1971.